

MIDDLE CREEK DAM (HYALITE)

Fact Sheet

PROJECT DESCRIPTION

- ◆ Located on Middle Creek, 15 miles south of Bozeman on the Gallatin Forest in Gallatin Co.
- ◆ Owned by DNRC & managed by SWPB under a U.S. Forest Service Special Use Permit.
- ◆ Operated by Middle Creek Water Users Association since 1951. Project consists of:
 - ◆ Earthen Dam with concrete panels on downstream side, 125 ft. high, 1,900 ft. long.
 - ◆ 5-foot diameter, cast in place steel-lined concrete conduit.
 - ◆ One, 54-inch diameter butterfly operating gate and a 54-inch emergency gate valve
 - ◆ The gate valves are operated from a tower on the dam crest.
 - ◆ The principal spillway has a labyrinth crest inlet and two baffled apron type spillway chutes.
 - ◆ The auxiliary spillway is earth lined with a 530 foot-long concrete crest.
- ◆ Original construction completed in 1951
- ◆ Reservoir stores 10,184 acre-feet at normal full pool, covering 490 surface acres.
- ◆ Provides irrigation water for 73 farms and ranches and drinking water for 2,000 households (1/3 of the City of Bozeman water supply is provided by the project).
- ◆ The dam is a “high hazard” structure, which means that its failure could cause loss of life. Farms and ranches, homes, schools, roads, bridges and utilities are in the flood plain.

PROJECT DEFICIENCIES AND REHABILITATION

- ◆ No deficiencies currently exist.
- ◆ The dam embankment was raised 10 feet in 1991-1992 as part of a major rehabilitation that included a new spillway, outlet conduit and seepage and drain system. The project meets all current safety standards.

Project Cost (1992 Dollars) \$5,200,000. Funding was secured through a federal loan.

PROPOSED IMPROVEMENTS

- ◆ An updated automated instrumentation system will be installed in the fall of 2008. The new system will improve seepage, drain flow and reservoir monitoring. Included as part of this project was a feasibility study on installing an early warning system.

Project Cost: \$137,525.



Upstream face



Downstream face



Lower Spillway



Upper Spillway

